to repeat themselves in a period of about twenty-four hours cannot be adduced to support the hypothesis of a rotation of about one day. Such variations arise from atmospheric causes, which tend to repeat themselves in a daily period.

"6. BIANCHINI'S observations were made on markings which were too poorly defined to give satisfactory results, and the alterations of aspect which he attributed to rotation were due to changes in the atmosphere of the planet itself.

"7. In the more southern regions of the planet there sometimes occur formations of markings, rather well-defined, clear and dark, which (so far as could be judged from the little which was seen of them) seem to reappear from time to time under identical aspects, and would thus lead us to suppose a relation of such phenomena with forces having fixed situations on the surface of *Venus*. Continuous and diligent observations of these appearances made with instruments adapted to the purpose would probably give an exact and definitive solution to the problem of the rotation of *Venus*.

"8. Important, likewise, is the study of certain very small markings, bright, spherical and well-defined, surrounded, or sometimes flanked, by intense shadow, and often coupled two by two, which appear in various parts of the planet, specially, near the terminator, and are wont to last a few days." E. S. H.

OBSERVATIONS OF SMALL SPOTS ON *JUPITER*.

Observing *Jupiter* on the morning of April 27th of this year, some rather singular black spots were seen just within the north edge of the north equatorial band. These were exactly like shadows of satellites, for which they were at first mistaken.

I recorded, "the two small spots are inky black, and seem very slightly elliptical." The seeing was excellent. Three of these peculiar spots were visible near transit when the great Red Spot was central, and, later, a fourth made its appearance at the following limb. The preceding one of the three first seen was considerably smaller than the others, and the observations refer to the two conspicuous ones,—*i. e.*, the second and third of April 27.

I have numbered these small spots 1, 2, 3, etc., in the order of increasing longitude, beginning with the preceding one of the two near the Red Spot.

Transits of the Small Dark Red Spots.

	1st Spot.	2d Spot.	3d Spot.
	h. *m.*	*h.* *m.*	*h.* *m.*
1890, April 26.....	15 53.2	16 34.2	.....
" July 8.....	.....	11 20.3	.....
" " 13.....	.....	.....	11 55.5
" " 15.....	.....	12 13.0	13 37.3
" " 30.....	.....	9 29.8	10 48.6
" Aug. 1.....	10 17.8	11 03.2	.....

Following are transits of two more of these small spots:

	d.	*h.*	*m.*
1890, July,	14	12	30.4;
Aug.,	2	9	42.9.

The above are in Mt. Hamilton mean time. Each of these small spots is now situated on a thin reddish spur that juts out from the north edge of the equatorial belt, and runs eastward parallel to it for some 25,000 or 30,000 miles. They are gaining on the Red Spot $10^s.02$ at each rotation of the planet.

In appearance the small black spots were not unlike the remarkable black spots that broke out just north of the north equatorial belt in 1880. (*See Publ.* A. S. P. No. 5, page 100, and page 111, spot *f*.)

E. E. B.

Mt. Hamilton, July, 1890.

White Spots on the Terminator of *Mars*.

The interesting phenomenon of bright spots projecting beyond the terminator of *Mars*, and presenting much the same appearance as the summits of lunar mountains and craters when first visible outside the terminator of the moon, was well seen with the thirty-six-inch refractor on the nights of July 5th and 6th. The attention of the astronomers was directed to the aspect of *Mars* on July 5th at 10^h P. s. t., by a visitor, who happened to be looking in the telescope at that time, on one of the public nights of the observatory. A sketch made by J. E. K. at this time shows a narrow elliptical white spot, from 1".5 to 2."0 long, projecting downward (northward) at a small angle with the line of the terminator. The seeing was 5, or the best which is known at the observatory. At 10^h 30^m the spot was within the disc, but still visible as an oval white patch on a darker background. This aspect is also shown in a sketch.